

Chapter 4: Environmental Resources

A significant regulatory development since the adoption of the 1987 Master Plan was the State's enactment of the Freshwater Wetlands Protection Act. Adopted in July 1987, the legislation mandated major modifications to the planning and zoning approval process. The Act established a systematic review procedure by the New Jersey Department of Environmental Protection (NJDEP) for land use activities in and around freshwater wetlands.

Freshwater wetland area boundaries and buffer requirements are determined in the field by State officials and wetlands experts on a case by case basis. It is still useful, however, for planning purposes to provide a map of Wall Township showing boundaries of freshwater wetland areas as determined by the State. The location of wetlands and the statutory-established buffer areas is important, since this mapping shows areas off-limits to development.

Figure 3 is a Freshwater Wetlands Map compiled from NJDEP mapping in 1987 using color infra-red aerial photographs. Since these aerial photos are interpreted and verified by ground truthing, the maps are the most reliable and accurate data source available for wetlands delineation on a statewide basis. They are, however, still only a planning tool and not a substitute for a site visit delineation and NJDEP approval.

Freshwater wetlands are located throughout the Township and include areas along the Manasquan River in Allaire State Park, Hannabrand Brook and Wreck Pond Brook. Other extensive areas are located in the east-central sector of the Township and the northern portion of Wall.

Flood Hazard Areas

Figure 4 shows the flood hazard areas of Wall Township. It is based on the Flood Hazard Boundary Map/Flood Insurance Rate Map prepared by the US Department of Housing and Urban Development and dated February 16, 1977. The flood hazard areas shown are the geographic areas of the 100 year flood.

Flood hazard areas are evident along the Manasquan River which forms the southern boundary of the Township; the Shark River, which forms the northern border; and Robert Swamp Brook, Judas Creek, Watson Creek, Hannabrand Brook, Wreck Pond Brook, East Branch Wreck Pond Brook, Polly Pod Brook, and Heroys Pond Creek, and tributaries to the Shark River.

Certain land areas of Wall Township are subject to tidal and riverine flooding. Segments of the Shark River, Manasquan River, Wreck Pond Brook, Hannabrand Brook and Heroys Pond Brook are tidal areas where flooding can occur as the result of unusually high tides. Riverine flooding may occur in the other streams and the non-tidal portions of the Shark River, Manasquan River, Wreck Pond Brook, Hannabrand Brook, and Heroys Pond Brook.

A 1976 flood insurance study commissioned by the federal Department of Housing and Urban Development (HUD) summarized flooding problems in Wall as follows:

The non-tidal sections of the Shark River, the Manasquan River, and Wreck Pond flow in wide, meandering channels. Flood storage provided along the rivers tend to reduce peak flows and increase the duration of the flooding.

Watson Creek, Judas Creek, Roberts Swamp Brook, Polly Pod Brook, and Heroys Pond Brook flow in well-defined channels. Urbanization in their drainage areas has increased the runoff to the streams. In addition, flooding is aggravated by the accumulation of debris at bridges and culverts. (Page 6)

Purchase and use of the area along Shark River and Manasquan River as parks has prevented development in the flood plain. This has probably reduced or prevented potential flood damages. (Page 7)

County and State acquisitions along the Manasquan and Shark Rivers have provided Wall Township with open space as well as environmental benefits. Since future acquisition opportunities may not be available along the Hannabrand and Wreck Pond Brooks, preservation by regulation may be necessary.

Approximately 1,254 acres are located within the flood hazard area shown on Figure 2. This includes over 250 acres of the Manasquan River watershed, over 370 acres for the Shark River and its tributary flood hazard areas, and over 590 acres for Wreck Pond and Hannabrand Brook flood hazard areas.

Steep Slopes

Figure 5 depicts the areas of Wall Township with slopes of 15 percent or more. The map was prepared from United States Geological Survey quadrangles, dated 1975. The slope zones are photomechanically generated from 10 foot contour lines by a process that translates distance between contours into percentage of slope.

Slopes greater than 15 percent (i.e. greater than 15 feet vertical over 100 feet horizontal) are considered environmentally sensitive or an environmental constraint and less suitable for development. Steep slope areas have a higher stormwater runoff rate, a reduced amount of soil cover for vegetation and higher erosion rates. In addition, such areas require a greater amount of site improvement costs in terms of preparation, terracing and the like. The key to minimizing environmental damage in steep slope areas is to reduce disturbances and maintain low densities or coverage.

Figure 5 shows numerous small slope areas that exceed a 15 percent grade. Approximately 811 acres in the Township exceed a 15 percent slope. This includes extensive areas in the southeastern part of the Township, the site of a former resource extraction operation. Another elongated area of steep slope shown on the map is along the Manasquan River in Allaire State Park. Another significant area of steep slopes is toward the northern border of the Township in the vicinity of the Shark River.

However, the steep slopes along edges of water bodies may be inaccurate due to the photo-mechanical technique of producing the map.

Unique Areas

In 1978, the Monmouth County Environmental Council published a report entitled “Monmouth County Unique Areas Study” which listed and described unique environmental resources of the County. The purpose of this section is to identify those areas to supplement the environmental inventory. The unique areas in Wall Township discussed by the Monmouth County Environmental Council are as follows: 1) the Manasquan River; 2) Wreck Pond Brook; 3) Estuarine Pond (Shark River); 4) Salt Marsh (Manasquan River); and 5) Allaire State Park.

Several of these areas are already protected by previous acquisition by the State of New Jersey. For example, the salt marsh along the Manasquan River is located in the Manasquan River Wild Life Management Area. Portions of the floodplain in the vicinity of Wreck Pond Brook, are under public ownership. This area was designated as a wildlife habitat, watershed/flood plain and marsh/bog.